

AMENDMENTS TO THE CLAIMS

1. (Currently Amended): An optical detecting sensor, comprising:

a sensor thin film transistor (TFT) generating optical current, the sensor TFT having source and drain electrodes;

a storage capacitor storing charges of the optical current generated in the sensor thin film transistor; and

a switching TFT controlling a release of the stored charges, the switching TFT having a gate electrode, an insulating layer on the gate electrode, an active layer on the insulating layer, an ohmic contact layer on the active layer, and dual layered source and drain electrodes that are each comprised of a transparent conductive material and a metal material, at least one layer of the dual layered drain electrode of the switching TFT connected to the source electrode of the sensor TFT,

wherein both of the transparent conductive material and the metal material of the dual layered source and drain electrodes contact the ohmic contact layer, ~~whereby sensitivity of the optical detecting sensor is improved.~~

2. (Canceled)

3. (Previously Presented): An optical detecting sensor according to claim 1, wherein the metal material is selected from a group consisting of tungsten, chrome and molybdenum.

4. (Original): An optical detecting sensor according to claim 1, wherein the transparent conducting material is indium tin oxide.

5-8. (Canceled)

9. (Previously Presented): An optical detecting sensor according to claim 1, wherein the metal material is a substantially non-transparent metal material.

10-14. (Canceled)

15. (Currently Amended): A thin film transistor (TFT) sensor, comprising:
- a sensor TFT having a gate electrode and spaced apart first and second sensor electrodes; and
- a switching TFT comprised of:
- a gate electrode on a transparent substrate;
- an insulating layer over the gate electrode;
- a semiconductor layer on the insulating layer and adjacent the gate electrode, wherein the semiconductor layer includes an active layer and an ohmic contact layer;
- spaced apart first and second switching electrodes on the semiconductor layer that define a channel region, wherein the second switching electrode electrically contacts the contact layer; and
- a storage capacitor having a first storage electrode and a second storage electrode, wherein the second storage electrode of the storage capacitor connects to the first sensor electrode and to the second switching electrode;
- wherein the second switching electrode is a dual layer structure comprised of a transparent conducting layer that is in contact with said ohmic contact layer and a non-transparent metal layer, both of which are in contact with the ohmic contact layer, and at least one layer of the second switching electrode is connected to the first sensor electrode that extends over the transparent conductive material and that wraps around an end of the transparent conductive material so as to contact the ohmic contact layer.

16. (Canceled)

17. (Previously Presented): A thin film transistor (TFT) sensor according to claim 15, wherein the transparent conducting layer contacts a side of the active layer.

18-21. (Canceled)

22. (New): An optical detecting sensor, comprising:

a sensor thin film transistor (TFT) generating optical current;

a storage capacitor storing charges of the optical current generated in the sensor thin film transistor; and

a switching TFT controlling a release of the stored charges, the switching TFT having a gate electrode, an insulating layer on the gate electrode, an active layer on the insulating layer, source and drain ohmic contact layers on the active layer, and dual layered source and drain electrodes that are each comprised of a transparent conductive layer and a metal layer,

wherein the metal layer of the dual layered drain electrode of the switching TFT extends over the transparent conductive layer and contacts the drain ohmic contact layer, and the extended edge of the metal layer of the dual layered drain electrode of the switching TFT substantially coincides with one of the edges of the drain ohmic contact layer.

23. (New): An optical detecting sensor according to claim 22, wherein the metal layer is selected from a group consisting of tungsten, chrome and molybdenum.

24. (New): An optical detecting sensor according to claim 22, wherein the transparent conducting layer is indium tin oxide.

25. (New): An optical detecting sensor according to claim 22, wherein the metal layer is a substantially non-transparent metal layer.